Installation Instruction Solid Hardwood Herringbone Flooring

Our instructions are in line with those of the National Wood Flooring Association (NWFA) Installation methods. Please refer to the NWFA website for additional information : www.nwfa.org . Installation using the methods shown here and on the NWFA website protect your WoodLand Reserve Solid hardwood warranty.

Solid wood floors are suitable for all rooms other than those that are subject to excessive moisture and high levels of humidity.

Important notice

All wood is hydroscopic (it will react to the moisture in the environment) and as a result will expand or contract accordingly. All sources of moisture must be rectified prior to the installation of the floor, and moisture levels in rooms fitted with wood flooring should be maintained at a stable level, in line with normal living conditions. Any construction dampness must be completely dry. It is important that you check each plank for any manufacturing defects. Any faults must be reported back to the store of purchase for an immediate refund or replacement prior to the flooring being installed. The boards in this pack are of mix grading and should be laid randomly across the floor to create the best effect. It is advisable to open a few cartons at a time to mix boards from each pack as they are installed.

I. Preparations

- Calculate the total square meters or square footage of the room(s) and add 10% for cutting and waste. The flooring should be placed in the room where it is to be installed to acclimatize for a minimum of 72 hours. It should be carefully stacked, in its packaging, to allow air to circulate. The boards should be stored and laid in a relative humidity between 45%-65% and at a room temperature of between 18°C and 21°C (65°F to 70°F). **The Installer or an independent agent must document all site tests. All site test records must be recorded and available if the homeowner files a claim.**
- Solid wood flooring is a natural product which will mature with age. The shade of your floor will change through exposure to sunlight.
- All substrates must be structurally sound and dry. The surface should be free of all contaminants and loose material. All potential sources of moisture e.g.walls, drains, damp proof courses, plumbing, fridges, washing machines etc. MUST be thoroughly checked and rectified if found to have any issues which could result in water damage.

If installing onto a concrete or screed base

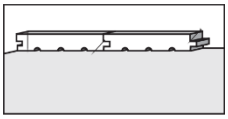
- In good drying conditions allow 24 hours per 1mm of new screed/concrete to ensure it is dry. Further time may be necessary depending on site conditions. In any case, moisture must be measured.
- Existing or new screeds/concrete must be checked for moisture using the the calcium chloride test. Humidity must be under 3.0 pounds per 1,000 sq. ft. per 24 hours at the time of installation. **The Installer or an independent agent must document this tests and record must be available if the homeowner files a claim.**
- **The glue down method is suitable for concrete or screed base**, For wood subfloor, see “If installing onto a wood subfloor” section
- Recommended Tools:
    - Flooring adhesive: PVA wood glue
    - Undercut or jamb saw
    - Adhesive trowel as recommended by adhesive manufacturer
    - Hammer
    - Tape measure
    - Tapping block (trimmed piece of flooring)
    - Chalk line
    - Wood or plastic spacers (1/2”)
    - Carpenter square
    - Flat bar or pull bar
    - Earplugs and safety glasses
    - Miter saw (chop-saw)
    - ANSI approved safety glasses

pic 1

- Screed floors must be at and level with no surface lumps and/or depressions in their surface. Uneven floors must be levelled to ensure even, uniform application of a liquid applied DPM. The floor can be levelled up to a maximum depth of 2 mm (0.08”) with a good quality-levelling compound. This must be allowed to dry out completely before applying the suitable damp proofing liquid.
- With this system use an approved adhesive for gluing solid wood to the various subfloors. The glue is applied directly to the screed (see pic 1).
- Once the first row of boards is correctly aligned and glued in place, weight them down while the glue sets. Any surplus glue that may seep out onto the surface or the wood must be removed immediately with a damp cloth. The glue should not be applied in the groove or the tongue of the flooring.
- Flooring straps can be used to pull boards together and hold them in place whilst the glue dries.
- Follow glue / adhesive manufacturer recommendations to determine when dry.

If installing onto a wood subfloor

- If moisture is present, i.e. over 12%, wood floors must not be fitted until the problem has been rectified. Please seek a professional installer's advice for options to resolve. **The Installer or an independent agent must document this tests and record must be available if the homeowner files a claim.**
- Solid wood flooring can be nailed over existing wood floorboards provided they are dry, firm and level. When installing over concrete subfloors lay a DPM followed by 18-24(12/16"-1") Exterior Grade plywood first then nail the flooring into the plywood. Solid wood should not be fixed over batters or directly over joists. Ensure that all under floor pipe work is lagged before the floor is laid. This will prevent localized shrinkage in the floor from hot adjacent pipes
- **The nail-down or staple-down method are suitable for wood subfloors.**
- Recommended Tools: The selection and use of any nailer is at the discretion and responsibility of the installer/ homeowner. Choose a nailer model that is specifically designed for tongue and groove applications. It is the installer's responsibility to determine the correct pressure for their nailer or stapler, and to ensure that the fastener is properly seated. Dimpling of the flooring face or edge is not a manufacturing defect.
    - Pneumatic 20-gauge t-and-g flooring gun
    - Underlayment • Earplugs & goggles
    - Tapping block (trimmed piece of flooring) • Tape Measure
    - Wood or plastic spacers (1/2") • Pencil
    - Flat bar or pull bar
    - Chalk line
    - ANSI approved safety glasses
    - Miter saw (chop-saw) • Hammer



pic 2

- Recommendation for nailing/stapling:
    - Secret nail/staple (nailing the board to the subfloor through the top of the tongue at 45°) ensuring a countersink 250 to 300mm (9 7/8" - 11 13/16")
    - For the sides of the floor top nail/staple (nailing the board to the subfloor through the top of the board) at 250-300 mm (9 7/8" - 11 13/16") intervals or onto every joist, and where possible within 75mm (3") of the end of each board and countersink through the boards as near to the wall as possible without forgetting expansion gap (see pic 2).

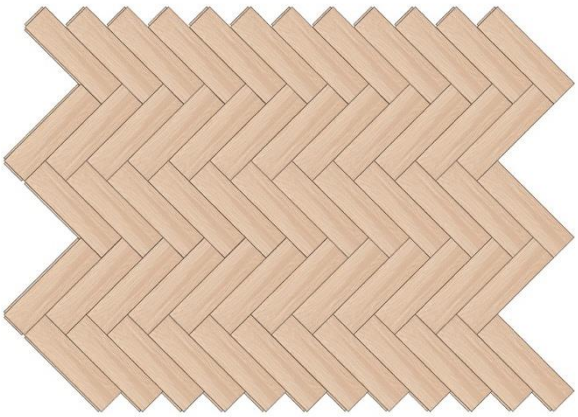
Subfloors with radiant heat

It is not recommended to install this product over subfloors with radiant heat and this will not be covered by the manufacturer's warranty. **Installing this flooring over radiant heat systems will void the manufacturer warranty.**

II. Installation Methods

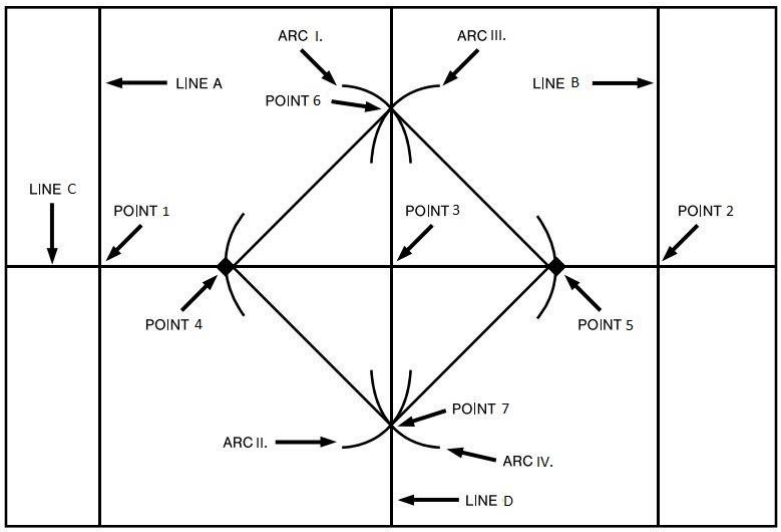
Herringbone is a challenging installation method. Professional help is highly recommended. If the surface to be laid exceed 10m/30ft into any direction, a T mold is necessary to allow a 20mm (3/4") expansion gap. Flatness of the subfloor is critical when dealing with a herringbone installation.
Herringbone flooring is specially designed with 'left' and 'right' tongue and groove pieces because the pattern is directional. When looking at the face of the boards, they are a mirror image of each other. Each box contains the same amount of each design.

Herringbone flooring can only be installed as a herringbone layout pattern

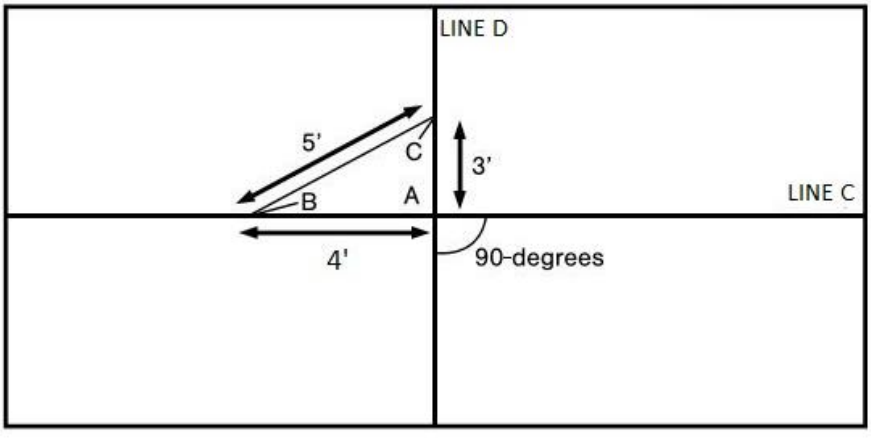


<u>Layout procedure</u>

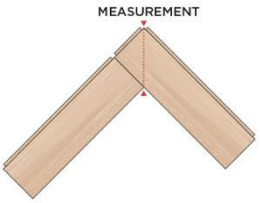
- Determine the herringbone pattern orientation in the room. Herringbone direction should run in accordance with client preference. The pattern may look best with the points in the direction of the longest dimension of the room or toward a major focal point.
- Measure the room for center and strike the main control, perpendicular and diagonal reference lines using the **trammel point method**. Trammel points, which are used to scribe a circle or radius, are composed of 2 points attached to a beam. They are designed to slide along the beam to adjust the radius by sliding the marking point along the beam and locking it into position.

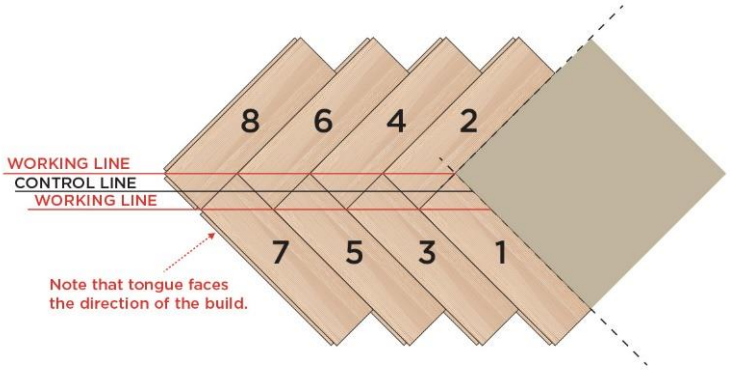


- Measure the width of the room from top to bottom left of center (Line A)
- Find the center of Line A and mark it (Point 1)
- Measure the width of the room from top to bottom right of center (Line B)
- Find the center of Line B and mark it (Point 2)
- Adjust for any difference in center between Point 1 & Point 2. For example, if Point 1 is one inch different than Point 2, divide the difference by two to establish the new center point of Line A.
- Snap a line the length of the room from Point 1 through Point 2. This is now Line C.
- Find the center point of Line C and mark it Point 3.
- From Point 3, use trammel point at fixed position on flat board to mark through Line C left of center, and mark it Point 4.
- From Point 3, use trammel point at the same fixed position on flat board to mark through Line C right of center, and mark it Point 5.
- From Point 4, use trammel point at a fixed position on flat board to draw arc above Line C. Mark this Arc I.
- From Point 4, use trammel point at the same fixed position on flat board to draw arc below Line C. Mark this Arc II.
- From Point 5, use trammel point at the same fixed position on flat board to draw arc above Line C. Mark this Arc III.
- From Point 5, use trammel point at the same fixed position on flat board to draw arc below Line C. Mark this Arc IV.
- Where Arc I. and Arc III. intersect, mark it Point 6.
- Where Arc II. and Arc IV. intersect, mark it Point 7.
- Snap a line from Point 6 through Point 7, and mark it Line D.
- Where Line D intersects Line C is the center of the room. Line C and Line D also form a 90-degree angle.
- Check the 90-degree angle using the 3-4-5 method (Pythagoras) as shown below



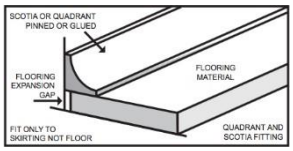
- Now that you have identified the centre of the room and the direction of installation, you can draw **the control line**. It may be line C or line D but you can as well choose any other direction as long as the line crosses point 3.
- Measure or calculate the diagonal as per below and divide by 4.
- This is the dimension used to establish the working lines on both sides of the control line.
- Strike two working lines, one on each side of, and parallel to the control line.



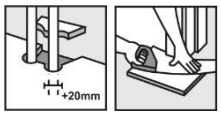


- Dry lay a small section and measure to confirm a balanced layout and check expected connection with walls to avoid installing any pieces shorter than 10".
- **Once the working lines are established the installation can begin**
- To keep the installation square, cut a square piece of plywood the size of the herringbone pattern and anchor it at the intersection of the working lines and diagonal lines.
- For direct glue, do not spread adhesive over working lines.
- Start with the tongue towards the build direction.
- Install pattern one row at a time.
- Periodically check alignment and always dry lay at least 8 boards before fixing.
- Lay a framing square from the points on the working line to the outermost point
- Once a row is installed, draw a new control line and 2 working lines using the previous row as references by measuring or dry laying few planks.

As soon as you reached a wall, pipe, pillars, frames, etc., a distance of 10m/30ft or a new room, keep a 15mm (5/8") gap for expansion. You may cover the gap with a skirting or a T mold to allow the floor to expend and shrink within this space. Closing the joint with putty or silicone is not considered a proper expansion gap. At doorways, a door threshold strip should be used to protect the edges of the floor and provide a decorative transition from one floor type to another (see pic 3 and 4).



pic 3



pic 4

IV. Care and Maintenance

- **Moisture level in the room must be maintain to normal leaving condition (Relative humidity between 45%-65% and at a room temperature of between 18-21°C (65°F to 70°F)).**
- It is recommended that you use felt pads under chairs and furniture (a plastic mat should be used with office chairs on wheels) Solid wood floors will mark with use, which adds to its character.
- Rubber based castors should be used for heavy load furniture such as armchairs and pianos.
- Doormats should be used inside and outside of all external doorways to prevent grit from being carried across the floor, protecting the surface from excessive wear and tear. Be sure that the backing of the mat is not rubber.
- For regular cleaning a dry or damp cloth is advised (we recommend that cloths be rung until no more drips are present before wiping the floor).
- Do not use abrasive cleaners, steel wool or scouring powder as this may damage the surface of your floor. Do not use wood oil soap products. Your floor has a surface layer protecting the wood from damage, which is durable and easily maintained. Once the surface layer has been damaged it is advisable to sand and refinish the entire floor to maintain an even finish rather than spot lacquering. This is a procedure which is best carried out by a professional. Please note that repeated sanding will remove some of the textured finish.